

Date: Sat, 15 Oct 94 04:30:09 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: List
Subject: Ham-Ant Digest V94 #346
To: Ham-Ant

Ham-Ant Digest Sat, 15 Oct 94 Volume 94 : Issue 346

Today's Topics:

 6meter ant?
 Antenna Rotor Wanted
Antennas are prohibited ...!!!!!!..
 Enough already! I want 80m!
 Is SWR it?
 Military 225-400 band antenna
 Quad's
 Radio Shack Antennas?
 Superior coaxial line? (2 msgs)
 Tiger Tail (HT antenna)

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 14 Oct 1994 02:24:06 -0400
From: sean1916@aol.com (Sean1916)
Subject: 6meter ant?

In article <94263.083540JBAACK31@MAINE.MAINE.EDU>,
<JBAACK31@MAINE.MAINE.EDU> writes:

I have 2 Mil surplus ground planes (tuneable) centered in the 6meter band
they are field kits and will fold up e-mail me for more info

Date: 14 Oct 1994 14:43:18 GMT

From: vbreault@rinhp750.gmr.com (Val Breault)
Subject: Antenna Rotor Wanted

In article <edh.781812310@hpuerca> edh@hpuerca.atl.hp.com (Ed Humphries) writes:

Can someone tell me what the windload rating is
for the readily available Radio Shack antenna
rotator? The local sales-droids don't even know
what I'm talking about.

Hi Ed, I'm one of those sales-droids on weekends. That information is not
available. It's a light duty rotator that is adequate for it's intended
use (Radio Shack television antennas) but is not rated for other purposes.

You could try finding out who the real manufacturer is and asking them.
That would be the best way to go. Alternatively, you could get the
Tandy Service Plan for an additional \$20. If the rotator fails within
three years the company will replace it under the terms of the TSP.
That solution lacks elegance, but it's easy.

I think it should be good enough for a small tribander. I bought one
for that purpose but haven't gotten the tower up yet.

--

Val Breault - N80EF - vbreault@gmr.com \ / |
Instrumentation dept GM NAO R&D Center \ / |
My opinions are not necessarily those of \ /__|
GMR nor of the General Motors Corporation \ / |___

Date: Thu, 13 Oct 94 22:49:40 -0500
From: Priscilla Rutledge <rutledges@delphi.com>
Subject: Antennas are prohibited ...!!!!!!..

Just to provide the Devil's advocate, it is not just a pretty looking
neighborhood that we, your neighbors, want. As you may have noticed,
most folks in late 20th century America make decisions based on perception,
rather than real risk. I personally don't mind even a 20m antenna if
you don't let it get rusty and tumbledown. What happens, though, is that
when I go to sell my house (and since so many of the people in my
association are military, 10-20% of them are on the market at any given time)
the eco-wimps ask worried questions about the "invisible rays" zapping
through the children's little bodies. If they heard you use the phrase
"Radiation Pattern" they probably wouldn't move into the same county.
This foolishness can trim \$10-15K off my final selling price. True, it
is neither my foolishness nor yours, but I reserve the right to
from whatever "liberty" anyone chooses to take with it!

Date: 13 Oct 1994 09:06:32 -0700
From: t1terryb@cascade.ens.tek.com (Terry Burge)
Subject: Enough already! I want 80m!

>>Greetings, all...

>>I have finally had enough of 20 and 40 meters, and am trying to come
>>up with a reasonable 80 performer for 80m. I live in an urban setting
>>with a small yard, and no practical access to the front yard. Verticals
>>are out of the question...no room for supports or guys. Certainly no
>>room for a dipole, nor do I have tall enough trees to get it a 1/4 wave
>>up.

>>

>

>

>Not to belabor the obvious, but in your post you DID say you wanted to
>work DX.... Under the circumstances given, you're much better off
>sticking with 20 and 40. Antennas are smaller, radiation angle is
>lower, absorption in the ionosphere is less and that's where the DX
>hangs out anyway. Ok, ok, there is some DX to be had on 80, but the
>guys you hear working it have humongous antennas - certainly not
>backyard-size loops at 30 feet. Antennas are fun to play with, but if
>it's DX you're after, etc, etc.

>

>I can almost hear the keyboards springing to life across the country
>with tales of how they worked so-and-so with such-and-such, but the laws
>of physics will have the last word, as usual. Do what you like, Sean,
>but don't get too disappointed. There ARE reasons why 20 and 40 are so
>popular.

>

>

Laws of Physics....????

Everytime someone works another person with 100 watts and a small vertical
or dipole at low height the 'laws of physics' are stepped on. Sure, the
big boys on 80 meters run big antennas...2,3, 4 element beams, 4 squares,
etc. but some also work with dipoles and compromise verticals. And they
still make contacts. They don't hear as well as the bigger antenna setups,
but then they learn to sharpen their skills and pull out the weak ones
anyway. IF you stick with it it's not that hard to work 100 countries on
80 meters. It just takes time, patience(sp) and doing the best you can
with your location's conditions.

Why not put up the best vertical you can..45 foot or so, match it up with
a tuning arrangement, and go to work on it around 3800 Khz. That is less
of a compromise antenna than my Butternut HF6V at 26 feet and I still

manage to work Europe every once in awhile. Not an easy thing from the west coast.

Also, with CQWWDX contest coming up a couple of weeks, not to mention the other contests, you will find lots of DX on 80 meters...and 20, 40, 160, etc.

And don't worry about the 'Laws of Physics'. They will take care of themselves and you will still manage to work some DX. Enjoy.

Terry,
KI7M

Date: 14 Oct 1994 16:36:22 GMT
From: Cecil_A_Moore@ccm.ch.intel.com
Subject: Is SWR it?

In article <37kuvb\$ji1@marlin.gulf.net>,
Sean Lester <lester@marlin.gulf.net> wrote:
>If you match your antenna impedance with your transmission line and
>transmitter, then get your SWR down to < 1.2:1, do I have to worry
>about anything else for VHF?

Hi Sean, what kind of coax did you use and how long is your transmission line. You will lose more than half of your power as heat in 100 ft of RG-58 on 146 MHz.

--
73, Cecil, KG7BK, 00TC (All my own personal fuzzy logic, not Intel's)

Date: Fri, 14 Oct 94 09:46:37 EDT
From: jgrubs@voxbox.norden1.com (Jim Grubs, W8GRT)
Subject: Military 225-400 band antenna

-----BEGIN PGP SIGNED MESSAGE-----

judithg560@aol.com (JudithG560) writes:

> In article <2AUG199415323129@vax2.concordia.ca>, hirschj@vax2.concordia.ca
> (JACK HIRSCHBERG) writes:
>
> For such very-wideband reception (or transmission) use a discone. It
> has no gain over a 1/4 wave ground plane, but it has extreme bandwidth.
> This is why you will see them in use at all military airfields.

And for mobile use, mount them upside down on the roof.

-----BEGIN PGP SIGNATURE-----

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-----END PGP SIGNATURE-----

--

jgrubs@voxbox.norden1.com

... I'm not politically incorrect; you're ideologically sheltered.

Date: Thu, 13 Oct 1994 17:43:15 GMT
From: ae517@FreeNet.Carleton.CA (Russ Renaud)
Subject: Quad's

In a previous article, GEITGEY%UKANVM.BITNET@VM1.NODak.EDU (Lynn Geitgey KB0LRB) says:

>The other day, while browsing several Antenna books, I came across an
>interesting, but unexplained idea. Is there some Quad Guru out there,
>who can explain the reasoning behind locating the feed point for a Quad
>in a corner, instead of the middle of a loop? I understand the positioning
>of the feed point, on the bottom, for Horizontal polarization. An on the
>side, for Verticle Polarization.

>

>What advantage/disadvantage's are there to the feed point being in a corner?

Well, it wouldn't get quite so loaded with freezing rain, if you happen to live in an area where that occurs.

I don't think there's a significant difference in the impedance at resonance, which is something that I've been trying to determine. Mininec just doesn't seem to model quads all that well, at least for determining impedance.

73 de va3rr/aa8lu

Date: Wed, 12 Oct 1994 23:34:00 GMT
From: clint.bradford@ectech.com (Clint Bradford)
Subject: Radio Shack Antennas?

D>Path: planet!isdnlm.mtsu.edu!darwin.sura.net!jabba.ess.harris.com!news.ess.h
>From: dbasinge@nickel.ucs.indiana.edu (Mike Basinger)

D>I'm thinking about buy an car antenna for my HTX-202. Are the antennas
>they sell at Radio Shack any good, or are they basically junk?

No, they are not basically junk. But MFJ makes a great 2M mag mount for
under 20 bucks that is tuned for you already!

* QMPro 1.53 * Useless laws weaken the necessary laws.

Date: 14 Oct 1994 18:12:43 GMT
From: royle@tek4.cse.tek.com (Roy W Lewallen)
Subject: Superior coaxial line?

cgwh@chevron.com (Curtis Wheeler):

>Loss is loss, a decibel is a decibel, whether transmitting or receiving.

Technically, this is true. But at HF, many decibels can be lost on the
receiving end without any impact on the signal/noise ratio, while a dB
lost on the transmitting end will result in a 1 dB decrease in the
signal/noise ratio. This is because the majority of the system noise is
caused by the atmosphere and other sources between the transmitting
and receiving antennas. At VHF and UHF, the noise of the receiver
dominates, and a dB loss at either end will result in a dB reduction
in signal/noise ratio.

Roy Lewallen, W7EL
roy.lewallen@tek.com

Date: 14 Oct 1994 15:57:32 -0400
From: c002@ns3.CC.Lehigh.EDU (David M. Roseman)
Subject: Superior coaxial line?

>>
>>One can even get this coax for free by visiting ones local cable TV provider.
>>Ask them if they have any leftover chunks from the giant spools they use. I've
>>gotten some nice sections (as much as 100feet) this way. The connectors for

>>Heliac are, however, more valuable than gold.
>>

ok..now is it the cable COMPANY...or just any TV station???

DAvid

David Roseman	c002@lehigh.edu
SysOp of NODE 3 BBS	The Flying HAM - BBS
Running OBV/2 Software	KBR-9318 - CB
	N3SQE/SVARC - Ham
HAMmy in IRC	N3SQE@N3IQD.FN20G0.PA.USA.NA - Packet

Date: Fri, 14 Oct 94 02:33:00 GMT
From: smp@agape.sol.net (Steven M. Palm)
Subject: Tiger Tail (HT antenna)

In article <rwa.781948871@aupair.cs.athabascau.ca> rwa@aupair.cs.athabascau.ca writes:

>
>levine@mc.com (Bob Levine) writes:
>>I discovered that in the plane of the HT (my FT530), the signal strength
>>is greatly increased with the TT.(>2x)
>
>Oh, my, 3dB+? Wow.
>
>On the other hand, if people will pay \$7.95 for it, then
>that's what it's worth.

One thing that is worth mentioning....

I had posted earlier that my HTX-202 HT did not like an aftermarket ICE Icom BP-8 compatible pack. After much playing around we found out that it was allowing RF back into the radio and triggering the Er2 PLL Unlocked error.

After reading the discussions here on the Tiger Tail, I decided to cut a hunk of wire about 19", and hang it off the BNC connector. I hooked up the ICE pack and COULD NOT DUPLICATE the Er2 code. If I removed the wire, it would be right back when it had a ground plane (i.e. up against my body or on a metal surface).

So.... I feel better, being able to use my new battery, and also think that the Tiger Tail might have some use after all. :)

Date: 14 Oct 1994 11:01:24 -0700
From: zardoz@ornews.intel.com (Jim Garver)

References<CxJntG.A3z@eskimo.com> <37jlu8\$7l2@cascade.ens.tek.com>, <t7fdkiubGo-J066yn@access.digex.net>
Subject: Re: Enough already! I want 80m!

I just installed a full size 80 meter 1/4 wave vertical up the side of one of my trees. Its 60 some feet tall and hangs off the side of the main trunk of a Cedar tree 2-3 feet out. I began laying down radials while observing the feedpoint with a noise bridge. Two radials more than 1/4 wavelength long opposite each other showed about 150 ohms. When I added a third radial perpendicular to the others the impedance dropped below 50 ohms where it has stayed since I've added more radials. I plan on adding radials until I see no improvement. They are just small gauge wires laying on top of the ground. The antenna itself is made out of 3/4" CATV hardline using the aluminum jacket as the element.

Mr. Moxon and maybe others believe that tree absorbtion from close vertical elements is very high but my experiments indicate differently. I used to have a full size 80 meter dipole 60 feet high and feed with ladder line to a Johnson Matchbox. I also had some old coax running up a tree so I shortened it until it resonated about 3800 kc. A wire fence under the tree was used for ground and counterpoise. Comparison between the two antennas showed that almost all signals were at least a couple of S units down on the vertical. All except the DX which was slightly stronger on the vertical. The best part was that local noise from the nearby city was severely attenuated on the vertical as well. All those neon sign transformers, motor brushes, power poles, etc. were way down.

DX big guns in the 3790-3800 window talk about working long or short path so they must be using steerable arrays. I can hear some of the DX they are working but can't hear others. VK, JA, are no problem for me here on the West Coast. Some nites are very noisy and others rather quiet just like the dipole used to be. The 80 meter vertical also seems to receive well on 160 meters, the BC band and LF. I plan on adding remote switched base coils for some of these freqs or maybe a motor driven roller inductor.

--

zardoz@ornews.intel.com WA7LDV "Each day is like a crisp new dollar bill.
I speak only for myself. How will you spend it?" - Barnaby Jones

Date: 14 Oct 94 15:52:41 GMT

From: hawley@aries.scs.uiuc.edu (Chuck Hawley)

References<378j3a\$8ot@vixen.cso.uiuc.edu> <1994Oct12.134357.31689@arrl.org>,
<37je9l\$rhpf@vixen.cso.uiuc.edu>

Subject: Re: Enough already! I want 80m!

tigger@prairienet.org (Sean E. Kutzko) writes:

>In a previous article, radams@cs.wmich.edu (Robert Adams) says:

>>>Sean E. Kutzko KF9PL (tigger@prairienet.org) wrote:

>>>

>>>: Honestly, I want a DX performer for a SMALL city lot. Knowing that this

>>>: is a HUGE order to ask for with the limited space I have, I got to thinking

>>

>>It's more than a "HUGE" order... it's more than facetious, too.

>facetious (fe-SEE-shus) adj. Joking or trying to be jocular, especially at
>an inappropriate time.

>I'm not joking. And, actually, I take offense to your statement.

Getting on HF, especially 80M, requires more than just an antenna. It requires developing some kind of attitude that "takes it all in stride". I enjoy very much the hams on HF, but I wouldn't want to live with 99.99% of them. When the remarks lead off the subject of what I want to talk abt or learn abt, then I usually try to talk right thru it as if it didn't happen. I think that's very effective....and I get what I want. Sometimes I have to just give up for the nite...if the racial, religious, male chauvinist, or potty mouth stuff gets going and I can't redirect the conversation. Same goes for the "No Balun" or "No Tuner" absolutists.

>I know I'm not going to get the performance of beverages and a 120' vertical
>resonater. Give me a break!

>Thanks to all of you who submitted some good ideas to me via e-mail.

I use a full wave loop on 80M and above. It's horizontal and takes 3 mounting points. I feed it where it's convenient to the shack. It fits into an 85 foot square space, mostly over the house. I think it's about the best compromise for small lots, and it works very well. Any normal nite, I can be q5 in California or Haiti on 100 watts on 80M. I think it's better than the local cloud warmer they say it is.

>Sean Kutzko KF9PL
>Urbana, IL

Chuck Hawley, KE9UW in Urbana, Illinois
hawley@aries.scs.uiuc.edu
School of Chemical Sciences, Electronic Services
University of Illinois, Urbana-Champaign

Date: Wed, 12 Oct 1994 18:04:23 +0000
From: G3SEK@ifwtech.demon.co.uk (Ian G3SEK)

References<1994Oct5.140644.23655@arrl.org> <373266\$30m9@info2.rus.uni-
stuttgart.de>, <682014245wnr@ifwtech.demon.co.uk>
Reply-To: G3SEK@ifwtech.demon.co.uk
Subject: Re: Yagis w/variable polarization

In article: <1994Oct11.134313.5390@arrl.org> zlau@arrl.org (Zack Lau (KH6CP))
writes:

> Have you used your array for long distance troposcattering?
> I wonder if there is a significant advantage to being able to
> rotate the array's polarization? In other words, over paths
> greater than 600 km, do you see significant polarization rotation?
> I normally run QRP, so even 600 km is a long path for me :-).

Sorry, no. The antenna is down close to the ground, so that it's easier
to work on, less obtrusive when not in use, and can operate in stronger
winds. As far as I know, troposcatter doesn't cause significant polarization
rotation, but you should check that with K1FO and NC1I who have higher-
mounted arrays than I do.

> If an East Coast USA station were putting up a fixed polarization
> array to work Europe on 432 EME, what would be the preferred
> polarization?

It depends on the combination of Faraday rotation, the approximately 90deg
polarization rotation caused by the longitude difference, and the E-W
position of the moon. You can predict and plan for the last two, but not
Faraday rotation, so there isn't a simple answer I'm afraid. A few years ago
K1FO researched the possibility of making skeds at times when the geometrical
(longitude and moon position) factors combine to make the rotation either
zero or 90deg, but I think the only conclusion he reached was to install
rotatable polarization!

It isn't very difficult to make a small EME array with polarization rotation. Two long yagis mounted at opposite ends of a cross-boom can be pivoted at the center of the boom and made to swing between vertical and almost horizontal polarization before they come close to the mast or tower. You can steer the array by hand every 20 minutes or so, but polarization must be rotatable from the shack - a small TV rotator will do it.

> I've heard that there are a couple of big European
> stations that can be worked [on 432], even if you can't hear your own
> echoes.

More than a couple! 2m isn't the only band with 'big guns' who are workable using a small system. At moonrise you should be able to hear SM4IVE (40ft dish, switchable polarization) and also DL9KR with a single long yagi and GaAsFET preamp. If you can work VE3ONT, go looking for those two as well. Not far behind are F5ELL, F5FHI, F6HYE, DL9EBL, SM2CEW and several others. With an array that can track the moon in elevation, you can avoid the moonrise 'rush hour' and have plenty of time to work these stations.

Now here's a question for you, Zack, since you've used more GaAsFETs than most people.

How do you tell which are which then they're mixed-up on the bench?
(A friend bought me some MGF1302s for me, but many different devices come in the same type of anonymous anti-static packaging, and he isn't sure which ones are my 1302s any more.) Do the one-letter or two-letter codes marked on the devices mean anything outside of the factory?

73 from Ian G3SEK	Editor, _The_VHF/UHF_DX_Book_
Abingdon, England	
g3sek@ifwtech.demon.co.uk	"In Practice" columnist for RadCom (RSGB)

Date: 14 Oct 1994 15:13:32 GMT
From: elmore@rap.ucar.edu (Kim Elmore)

References<36q6d6\$s60\$1@mhade.production.compuserve.com> <CxEnKJ.E7L@eskimo.com>,
<500XpBk.rutledges@delphi.com>
Subject: Re: Antennas are prohibited ...!!!!!!..

In article <500XpBk.rutledges@delphi.com> Priscilla Rutledge

```
<snip>

>you don't let it get rusty and tumbledown.  What happens, though, is that
>when I go to sell my house (and since so many of the people in my
>association are military, 10-20% of them are on the market at any given time)
>the eco-wimps ask worried questions about the "invisible rays" zapping
>through the children's little bodies.  If they heard you use the phrase
>"Radiation Pattern" they probably wouldn't move into the same county.
>This foolishness can trim $10-15K off my final selling price.  True, it
```

At whatever confidence interval we chose, the answer was "no". We also examined if the presence of amateur towers affected the length of time a home was on the market. Again, the answer was "no".

At first blush, such arguments as decreased property values seem compelling but then the concept of an "Ether" through which radio waves propagated seemed compelling, too. Neither one is correct.

```
* _._ ._. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. _.. *  
* Said by NQOI while working on his shack: *  
* "All these *wires*! Why do they call it `wireless'!?" *
```

References<378j3a\$8ot@vixen.cso.uiuc.edu> <CxJntG.A3z@eskimo.com>,
<37jlu8\$7l2@cascade.ens.tek.com>
Subject: Re: Enough already! I want 80m!

In article <37jlu8\$7l2@cascade.ens.tek.com>, Terry Burge wrote:

>
> Laws of Physics....????
> Everytime someone works another person with 100 watts and a small vertical
> or dipole at low height the 'laws of physics' are stepped on. Sure, the
> big boys on 80 meters run big antennas...2,3, 4 element beams, 4 squares,
> etc. but some also work with dipoles and compromise verticals. And they
> still make contacts. They don't hear as well as the bigger antenna setups,
> but then they learn to sharpen their skills and pull out the weak ones
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> 80 meters. It just takes time, patience(sp) and doing the best you can
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>
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> a tuning arrangement, and go to work on it around 3800 Khz. That is less
> of a compromise antenna than my Butternut HF6V at 26 feet and I still
> manage to work Europe every once in awhile. Not an easy thing from the
> west coast.
>
> Also, with CQWWDX contest coming up in a couple of weeks, not to mention
> the other contests, you will find lots of DX on 80 meters...and 20, 40,
> 160, etc.
>
> And don't worry about the 'Laws of Physics'. They will take care of them-
> selves and you will still manage to work some DX. Enjoy.

>
> Terry,
> KI7M

>
>
>
A local ham here in Maryland put a Hustler 80M mobile antenna in his attic with
2 counterpoises and he had excellent results, considering the size/reduced
bandwidth. The extra height above ground (about 20 feet) for the feed point
makes a BIG difference.

Andy N3LCW

End of Ham-Ant Digest V94 #346
